



# Texas Brine Company, LLC

1301 Highway 70  
Belle Rose, LA 70341  
Phone: 985-369-6657  
Fax: 985-369-7873



April 8, 2013

Commissioner James H. Welsh  
P.O. Box 94275  
Baton Rouge, LA 70804

**RE: In response to State of Louisiana Department of Natural Resources Office of Conservation's Second Amendment to Declaration of Emergency and Directive**

Commissioner Welsh,

In response to the Second Amendment and Declaration of Emergency and Directive order issued by the Louisiana Department of Natural Resources (LDNR), Office of Conservation on September 25, 2012, Texas Brine Company, LLC (TPC) understands the seven items listed in the document.

In the above mentioned, TBC was specifically directed and ordered to perform certain tasks outlined in the above mentioned document. Below are the required responses, as directed.

1. TBC's counsel provided LDNR legal counsel with a response to Directives 1-3 on September 28, 2012.
2. TBC understands Directive 4, which is to provide all daily logs and field notes from all contractors conducting investigation into subsidence and natural gas bubbling. The Daily Action Summary and results for current information can be found in the Attachment section of this report.
3. TBC understands Directive 5, which directs TBC to immediately allow for split or share any sample taken on site related to Well 3A (Serial Number 974265), the cavern, other wells facilities or other site locations. The Daily Action Summary of today's collection can be found in Attachment section of this report.
4. TBC understands Directive 6, which directs TBC to immediately report the results (final and preliminary) of any tests, logs samples or data collection performed on Well 3A, the cavern, other wells, facilities or site locations that indicate a change in any previously known conditions related to the investigation of the subsidence or natural gas bubbling

events, and continue to report any such results. The Daily Action Summary and the Results related to this Directive can be found in Attachment section of this report.

5. TBC understands the Directive 7, which states that TBC will provide a daily summary of all tests, or logs performed or samples taken from Well 3A and the cavern as well as any results of those tests or logs, including preliminary as of September 25, 2012 and going forward. The Daily Summary and Results related to this Directive can be found in Attachment section of this report.

Please note that the drilling rig used for the Observation Well 3A has been removed and the site is being rigged down and returned to pre-drilling condition. As such, daily drilling reports for this well have ceased. Plans are being made for longer term potential gas venting/flaring requirements and possible hydrocarbon material recover from Well 3A.

In addition, previous daily summary reports issued to LDNR have included significant duplicate information as there is a fair amount of overlap in the information requested in each of the Directives included in the September 25, 2012 order. All requested information associated with the Directives issued in the September 25, 2012 order are included in the Attachment section of this report.

TBC believes that the submittal of this report satisfies the requirements of the Declaration of Emergency and Directive issued on September 25, 2012. As directed this report is submitted by email to [conservationorder@la.gov](mailto:conservationorder@la.gov), ref. "Emergency Declaration-Texas Brine Company LLC-9/25/2012.



Bruce E. Martin

Vice President, Operations

Texas Brine Company, LLC

## **Summary Table for Daily Events**

TBC Oxy Grand Bayou Data Management-Environmental								
Contractor	Responsibilities	Collected By	Date Collected	Delivered to Lab	Results from Lab	Laboratory	Method	Date to Agencies
Sage	Stationary Air Monitoring	Steve Shaughnessy - 08:00 - 09:00, Pete Hyatt IV (Code Red) - 07:00 - 17:00	4/5 - 4/7/2013	NA	NA	NA	AreaRAE Monitors	4/6 - 4/8/2013
	Residential Air Monitoring	Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities.	4/5 - 4/7/2013	NA	NA	NA	NA	4/6 - 4/8/2013
	Gas Seep Sampling	No work performed	4/5 - 4/7/2013	NA	NA	NA	NA	4/6 - 4/8/2013
	Well Gas Sampling	Steve Shaughnessy ORW 23 12:20-12:30	4/5 - 4/7/2013	Yes	NA	Accutest SPL	TO15 LHG & Sulfur	upon receipt of results from lab
	Under Slab Gas Sampling	Delivery to Laboratory Only Site 57	4/4 - 4/7/2013 (Collected by Tetra Tech)	Yes	No	Accutest	Isotopic TO15	upon receipt of results from lab
	Indoor Air Monitoring	No work performed	4/5 - 4/7/2013	NA	NA	NA	NA	4/6 - 4/8/2013
Respec	Inclinometers/Tilt Meters	Install instrumentation for new location of IPI-3. Move AR-2 to IPI-3 location. Adjust all antennas for new IPI-3 location.	Eric Krantz, Peter Rausch	NA	NA	NA	NA	NA
	InSAR Reflector Installations	4/2 - 4/7/2013	No work conducted	No work conducted	NA	NA	NA	NA
	Subsidence Survey-Fenstermaker	4/2 - 4/7/2013	No work conducted	No work conducted	NA	NA	NA	NA
	Shallow Geophone Installation	4/2 - 4/7/2013	No work conducted	No work conducted	NA	NA	NA	NA
	Deep Geophone Installation	4/2 - 4/7/2013	No work conducted	No work conducted	NA	NA	NA	NA
	Amendment #3, Directive #2	4/2 - 4/7/2013	No work conducted	No work conducted	NA	NA	NA	NA
Miller	Weekly Stability Survey	Kevin Pichoff	4/5/2013	NA	NA	NA	NA	NA
	Misc. Survey Work	No Work Performed	4/5 - 4/7/2013	NA	NA	NA	NA	NA
	Sinkhole Hydro/Perimeter Survey	No Work Performed	4/5 - 4/7/2013	NA	NA	NA	NA	NA
Pisani	Surface Water	PMR	4/5/2013	4/5/2013	NA	GCAL	SW-846 9056A; SM 45005 H; SM 2540C; SM 2510B	NA
	Industrial Well Water	NA	NA	NA	NA	NA	NA	NA
	MRAA Well Water	NA	NA	NA	NA	NA	NA	NA
	Geoprobe Wells	NA	NA	NA	NA	NA	NA	NA
<b>Grand Bayou Well 3A</b>								
Daily Operations at 3A		Summary of Today's events						
4/6 - 4/8/2013		Oxy 3A						
	7am	530.39	4/6/2013					
	7am	502.5	4/7/2013					
	7am	485.39	4/8/2013					
4/6 - 4/8/2013		Relief Well #1						
		See ORW-01 Flare Spreadsheet						

Laboratory

Laboratory  
Lab Contact

## **Attachments**

## **Daily Action Summary**

**April 5, 2013**

### **Stationary Air Monitoring**

- Steve Shaughnessy onsite from 08:00 to 09:00. Changed out the monitors between 08:20 and 08:40. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Pete Hyatt IV of Code Red (monitor sub-contractor) onsite from 07:00 to 17:00. Assisted in battery change outs and maintenance of the monitoring equipment.

### **Residential Air Monitoring**

- Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

### **Gas Seep Sampling**

- Not Scheduled

### **Well Gas Sampling**

- Steve Shaughnessy started the scheduled Well Gas Sampling at 12:20 and finished at 12:30. The samples were collected from ORW 23, which is located at the corner of Sauce Piquante Street and Gumbo Street. The samples were taken to Accutest/SPL laboratories to be analyzed. Samples will be tested for Light Hydrocarbon Gas (LHG) and Sulfur compounds (S) at the SPL Louisiana laboratory and Toxics (TO15) at the Accutest New Jersey laboratory. Samples were also shipped to Isotech Laboratories in Illinois for isotopic analysis.

### **Under Slab Gas Sampling**

- Steve Shaughnessy delivered under slab gas samples collected at Site 57 by Tetra Tech on April 4, 2013 to Accutest/SPL laboratories to be analyzed. Samples will be tested for Light Hydrocarbon Gas (LHG) and Sulfur compounds (S) at the SPL Louisiana laboratory and Toxics (TO15) at the Accutest New Jersey laboratory. Samples were also shipped to Isotech Laboratories in Illinois for isotopic analysis.

### **Air Indoor Monitoring**

- Not Scheduled

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
04/05/2013 01:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/05/2013 02:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/05/2013 03:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
04/05/2013 04:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
04/05/2013 05:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/05/2013 06:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/05/2013 07:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/05/2013 08:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
04/05/2013 09:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 10:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 12:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 01:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 02:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 03:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 04:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
04/05/2013 05:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
04/05/2013 06:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
04/05/2013 07:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
04/05/2013 08:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
04/05/2013 09:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 10:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 11:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 12:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:



**Well Gas Sampling Location**

**April 5, 2013**

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
04/05/2013 05:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/05/2013 06:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/05/2013 07:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/05/2013 08:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9
04/05/2013 09:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 10:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 11:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 12:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 01:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 02:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 03:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 04:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
04/05/2013 05:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
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04/05/2013 07:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2
04/05/2013 08:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0
04/05/2013 09:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 10:00:00 PM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/05/2013 11:00:00 PM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 12:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 01:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 02:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 03:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 04:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 05:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9

Notes:

## **Daily Action Summary**

**April 6, 2013**

### **Stationary Air Monitoring**

- Steve Shaughnessy onsite from 08:00 to 09:10. Changed out the monitors between 08:37 and 08:57. Collected data from the monitoring database and forwarded to Eric Rucinski in the Baton Rouge office for processing.
- Pete Hyatt IV of Code Red (monitor sub-contractor) onsite from 08:00 to 11:00. Assisted in battery change outs and maintenance of the monitoring equipment.

### **Residential Air Monitoring**

- Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

### **Gas Seep Sampling**

- Not Scheduled

### **Well Gas Sampling**

- SPL provided LHG/S results of the gas samples collected on April 5, 2013 from ORW 23, which is located at the corner of Sauce Piquante Street and Gumbo Street. Isotopic analysis and TO15 analytical results are not yet available.

### **Under Slab Gas Sampling**

- SPL provided LHG/S results of the under slab gas samples collected at Site 57 by Tetra Tech on April 4, 2013. Isotopic analysis and TO15 analytical results are not yet available.

### **Air Indoor Monitoring**

- Not Scheduled

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
04/06/2013 01:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 02:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 03:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 04:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 05:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 06:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 07:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
04/06/2013 08:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	2.0	20.9
04/06/2013 09:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	4.3	20.9
04/06/2013 10:00:00 AM	0.0	0.0	<1.0	0.0	21.3	<1.0	0.0	<1.0	0.0	21.2	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	<1.0	20.9
04/06/2013 11:00:00 AM	0.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	0.0	21.3	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	2.7	20.9
04/06/2013 12:00:00 PM	0.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	<1.0	20.9
04/06/2013 01:00:00 PM	0.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.0	<1.0	0.0	<1.0	0.0	20.9
04/06/2013 02:00:00 PM	0.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9
04/06/2013 03:00:00 PM	0.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	<1.0	20.9
04/06/2013 04:00:00 PM	0.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9
04/06/2013 05:00:00 PM	0.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9
04/06/2013 06:00:00 PM	0.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9
04/06/2013 07:00:00 PM	0.0	0.0	<1.0	0.0	21.4	0.0	0.0	<1.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9
04/06/2013 08:00:00 PM	0.0	0.0	<1.0	0.0	21.4	0.0	0.0	<1.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/06/2013 09:00:00 PM	0.0	0.0	<1.0	0.0	21.3	0.0	0.0	<1.0	0.0	21.3	<1.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/06/2013 10:00:00 PM	0.0	0.0	<1.0	0.0	21.3	0.0	0.0	<1.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/06/2013 11:00:00 PM	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 12:00:00 AM	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9

Notes:

**Texas Brine - Belle Rose, Louisiana**  
**Under Slab Gas Sampling Results**

	Sample Date: 4/4/2013 Site 57 House	Sample Date: 4/4/2013 Site 57 Shed		
<b>LHG Constituents</b>				
<b>SPL Sample ID</b>	<b>1408-SAPIQ-H</b>	<b>1408 SAPIQ-S</b>		
<b>Pollutant</b>	<b>Mol %</b>	<b>Mol %</b>		
Nitrogen	92.868	98.295		
CO <sub>2</sub>	5.863	0.762		
Methane	1.269	0.943		
Ethane	ND	ND		
Propane	ND	ND		
Iso-butane	ND	ND		
n-Butane	ND	ND		
Iso-pentane	ND	ND		
n-Pentane	ND	ND		
Hexanes	ND	ND		
Heptanes+	ND	ND		
<b>Sulfides</b>				
<b>SPL Sample ID</b>	<b>1408-SAPIQ-H</b>	<b>1408 SAPIQ-S</b>		
<b>Pollutant</b>	<b>ppm<sub>w</sub></b>	<b>ppm<sub>w</sub></b>		
Hydrogen Sulfide	ND	ND		
Carbonyl Sulfide	<1.0	<1.0		
Dimethyl Sulfide	ND	ND		
Unkown Sulfides	ND	ND		
Methyl Mercaptans	ND	ND		
Ethyl Mercaptans	ND	ND		
Isopropyl Mercaptans	ND	ND		
n-Propyl Mercaptans	ND	ND		
sec-Butyl Mercaptans	ND	ND		
tert-Butyl Mercaptans	ND	ND		
n-Butyl Mercaptans	ND	ND		
pri-Amyl Mercaptans	ND	ND		
Carbon Disulfide	ND	ND		
Unkown Disulfides	ND	ND		
Thiophene	ND	ND		
<b>Toxics Detected</b>	TO-15 Analysis Not Yet Received	TO-15 Analysis Not Yet Received		
<b>Accutest Sample ID</b>				
<b>Pollutant</b>				
Benzene				
Carbon Disulfide				
Chloroform				
Chloromethane				
Cyclohexane				
Dichlorodifluoromethane				
Ethylbenzene				
(n) Hexane				
Methylene Chloride				
Methyl Ethyl Ketone				
Methyl Isobutyl Ketone				
Styrene				
1,2,4 Trimethylbenzene				
1,3,5 Trimethylbenzene				
2,2,4-Trimethylpentane				
Tetrachloroethylene				
Toluene				
Trichloroethylene				
Xylenes (total) m,p plus o				
<b>TOTAL</b>				
<b>Non-Toxics Detected</b>				
<b>Accutest Sample ID</b>				
<b>Pollutant</b>				
Acetone				
Ethanol				
4-Ethyltoluene				
Freon 113				
Heptane				
Isopropyl Alcohol				
Tertiary Butyl Alcohol				
Trichlorofluoromethane				

**Texas Brine - Belle Rose, Louisiana  
Well Gas Sampling Results**

	Sample Date: 4/5/2013 ORW 23
<b>LHG Constituents</b>	
<b>SPL Sample ID</b>	<b>TB ORW 23</b>
<b>Pollutant</b>	<b>Mole %</b>
Nitrogen	2.737
CO <sub>2</sub>	1.061
Methane	92.822
Ethane	2.406
Propane	0.650
Iso-butane	0.171
n-Butane	0.114
Iso-pentane	0.030
n-Pentane	0.008
Hexanes+	0.001
Heptanes+	ND
<b>Sulfides</b>	
<b>SPL Sample ID</b>	<b>TB ORW 23</b>
<b>Pollutant</b>	<b>ppm<sub>w</sub></b>
Hydrogen Sulfide	ND
Carbonyl Sulfide	ND
Dimethyl Sulfide	ND
Unkown Sulfides	ND
Methyl Mercaptans	ND
Ethyl Mercaptans	ND
Isopropyl Mercaptans	ND
n-Propyl Mercaptans	ND
sec-Butyl Mercaptans	ND
tert-Butyl Mercaptans	ND
n-Butyl Mercaptans	ND
pri-Amyl Mercaptans	ND
Carbon Disulfide	ND
Unkown Disulfides	ND
Thiophene	ND
<b>Toxics Detected</b>	<b>TO-15 Analysis Not Yet Received</b>
<b>Accutest Sample ID</b>	
<b>Pollutant</b>	
Benzene	
Carbon Disulfide	
Chloroform	
Chloromethane	
Cyclohexane	
Dichlorodifluoromethane	
Ethylbenzene	
(n) Hexane	
Methylene Chloride	
Methyl Ethyl Ketone	
Methyl Isobutyl Ketone	
Styrene	
1,2,4 Trimethylbenzene	
1,3,5 Trimethylbenzene	
2,2,4-Trimethylpentane	
Tetrachloroethylene	
Toluene	
Trichloroethylene	
Xylenes (total) m,p plus o	
<b>TOTAL</b>	
<b>Non-Toxics Detected</b>	
<b>Accutest Sample ID</b>	
<b>Pollutant</b>	
Acetone	
Ethanol	
4-Ethyltoluene	
Freon 113	
Heptane	
Isopropyl Alcohol	
Tertiary Butyl Alcohol	
Trichlorofluoromethane	



**Well Gas Sampling Location**

**April 5, 2013**

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
04/06/2013 05:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 06:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9
04/06/2013 07:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9
04/06/2013 08:00:00 AM	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	2.0	20.9
04/06/2013 09:00:00 AM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	4.3	20.9
04/06/2013 10:00:00 AM	0.0	0.0	<1.0	0.0	21.3	<1.0	0.0	<1.0	0.0	21.2	<1.0	<1.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	<1.0	20.9
04/06/2013 11:00:00 AM	0.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	0.0	21.3	<1.0	<1.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	2.7	20.9
04/06/2013 12:00:00 PM	0.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	<1.0	20.9
04/06/2013 01:00:00 PM	0.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.0	<1.0	0.0	<1.0	0.0	20.9
04/06/2013 02:00:00 PM	0.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9
04/06/2013 03:00:00 PM	0.0	0.0	<1.0	0.0	21.6	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	<1.0	20.9
04/06/2013 04:00:00 PM	0.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9
04/06/2013 05:00:00 PM	0.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	0.0	21.5	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9
04/06/2013 06:00:00 PM	0.0	0.0	<1.0	0.0	21.5	0.0	0.0	<1.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	<1.0	0.0	0.0	0.0	20.9
04/06/2013 07:00:00 PM	0.0	0.0	<1.0	0.0	21.4	0.0	0.0	<1.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	21.1	<1.0	<1.0	0.0	0.0	20.9
04/06/2013 08:00:00 PM	0.0	0.0	<1.0	0.0	21.4	0.0	0.0	<1.0	0.0	21.4	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/06/2013 09:00:00 PM	0.0	0.0	<1.0	0.0	21.3	0.0	0.0	<1.0	0.0	21.3	<1.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/06/2013 10:00:00 PM	0.0	0.0	<1.0	0.0	21.3	0.0	0.0	<1.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/06/2013 11:00:00 PM	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	21.3	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 12:00:00 AM	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 01:00:00 AM	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 02:00:00 AM	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 03:00:00 AM	0.0	0.0	<1.0	0.0	21.0	0.0	0.0	<1.0	0.0	21.1	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 04:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.1	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 05:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9

Notes:

## **Daily Action Summary**

**April 7, 2013**

### **Stationary Air Monitoring**

- Eric Rucinski onsite from 07:55 to 08:45. Changed out the monitors between 08:10 and 08:25. Collected data from the monitoring database and forwarded to Steve Shaughnessy in the Baton Rouge office for processing.
- Pete Hyatt IV of Code Red (monitor sub-contractor) onsite from 07:00 to 11:00. Assisted in battery change outs and maintenance of the monitoring equipment.

### **Residential Air Monitoring**

- Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

### **Gas Seep Sampling**

- Not Scheduled

### **Well Gas Sampling**

- Not Scheduled

### **Under Slab Gas Sampling**

- Not Scheduled

### **Air Indoor Monitoring**

- Not Scheduled

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well				
	ST-3					ST-2					ST-1					OG 3A-1					RW-1				
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)
04/07/2013 01:00:00 AM	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 02:00:00 AM	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	<1.0	0.0	21.2	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 03:00:00 AM	0.0	0.0	<1.0	0.0	21.0	0.0	0.0	<1.0	0.0	21.1	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 04:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.1	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 05:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 06:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 07:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 08:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 09:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 10:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 11:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 12:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.0	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 01:00:00 PM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 02:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 03:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 04:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 05:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.1
04/07/2013 06:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2
04/07/2013 07:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.2
04/07/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	21.0
04/07/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/07/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9
04/08/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9

Notes:

Texas Brine - Belle Rose, Louisiana  
Hourly Air Monitoring Data

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

Date-Time *	South-most Pipeline Site					Middle-most Pipeline Site					North-most Pipeline Site					On Drill Rig Boom					Relief Well					
	ST-3					ST-2					ST-1					OG 3A-1					RW-1					
	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	Non-Methane VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	
04/07/2013 05:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	
04/07/2013 06:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	
04/07/2013 07:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	
04/07/2013 08:00:00 AM	0.0	<1.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9	
04/07/2013 09:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 10:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 11:00:00 AM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 12:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.0	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 01:00:00 PM	0.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 02:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 03:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 04:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 05:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	21.1
04/07/2013 06:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.2	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	<1.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	21.2
04/07/2013 07:00:00 PM	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	21.2
04/07/2013 08:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.1	0.0	0.0	<1.0	0.0	21.2	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	21.0
04/07/2013 09:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.1	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 10:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/07/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/08/2013 12:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/08/2013 01:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/08/2013 02:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/08/2013 03:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/08/2013 04:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9
04/08/2013 05:00:00 AM	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	<1.0	0.0	20.9	0.0	0.0	0.0	0.0	0.0	20.9	<1.0	<1.0	<1.0	0.0	20.9

Notes:

# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

## Daily Field Report

Report By: Eric Krantz

Date: 04/02/13

Company: RESPEC

Work Order #:                   ()

Personnel	Company	Job Title
Eric Krantz	RESPEC	Engineer

**Time Onsite:** Start Time:                    End Time:                   

(Note: on-site time only reflects time on-site; it does not reflect time taken for off-site activities)

**Equipment Onsite:**

**Daily Activity:** Travel.

**Proposed Schedule:** Proposed schedule: April 3rd site recon and initial mounting structure fabrication, April 4th install new structure for IPI-3 and maybe others depending on results of field recon. April 5th move and install IPI equipment. All dates and the scope are tentative.

Initials: ELK

# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

## Daily Field Report

Report By: Eric Krantz

Date: 04/03/13

Company: RESPEC

Work Order #:                   ()

Personnel	Company	Job Title
Eric Krantz	RESPEC	Engineer

**Time Onsite:** Start Time: 1200 End Time: 1700

(Note: on-site time only reflects time on-site; it does not reflect time taken for off-site activities)

**Equipment Onsite:**

**Daily Activity:** Morning rain prevents onsite work. Arrive on site afternoon, discuss plans with Maurice. Discuss safety with Jerry Armstrong. Discuss equipment and materials procurement with Scott Borne. Hardware store. Pad-3 recon related to pressure transducer. Airboat procurement.

**Proposed Schedule:** April 4th install new structure for IPI-3 and maybe others depending on results of field recon. April 5th move and install IPI equipment. All dates and the scope are tentative.

Initials: ELK

# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

## Daily Field Report

Report By: Eric Krantz

Date: 04/04/13

Company: RESPEC

Work Order #:                   ()

Personnel	Company	Job Title
Eric Krantz	RESPEC	Engineer
Peter Rausch	RESPEC	Field Engineer

**Time Onsite:** Start Time: 0800 End Time: 1700

(Note: on-site time only reflects time on-site; it does not reflect time taken for off-site activities)

**Equipment Onsite:** Airboat, compressor, pneumatic post pounder, reciprocating saw

**Daily Activity:** TetraTech safety training with Jerry Armstrong. Materials and tools procurement. Site tour with Peter Rausch. Site recon. Install mounting structure for IPI-3 move. Dismantle IPI-3 equipment from old locations, pull inclinometer. Install solar panel, housing, antenna data logger at IPI-3 new locations.

**Proposed Schedule:** April 5th move and install IPI equipment and artificial reflector. All dates and the scope are tentative.

Initials: ELK

# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

## Daily Field Report

Report By: Eric Krantz

Date: 04/05/13

Company: RESPEC

Work Order #:                   ()

Personnel	Company	Job Title
Eric Krantz	RESPEC	Engineer
Peter Rausch	RESPEC	Field Engineer

**Time Onsite:** Start Time: 0800 End Time: 1730

(Note: on-site time only reflects time on-site; it does not reflect time taken for off-site activities)

**Equipment Onsite:** Airboat, drill

**Daily Activity:** Install inclinometer and inclinometer housing at IPI-3 new location. Programming datalogger and checking cellular and radio connections and Atlas data. Move artificial reflector to new IPI-3 location. Visit other IPI sites and adjust antennas. Confirm communications.

**Proposed Schedule:** Field recon tentatively scheduled for Saturday, Sunday, or Monday.

Initials: ELK

# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: Eric Krantz

Date: 04/06/13

Company: RESPEC

Work Order #:           ()

Personnel	Company	Job Title

**Time Onsite:**            Start Time:                       End Time:           

(Note: on-site time only reflects time on-site; it does not reflect time taken for off-site activities)

**Equipment Onsite:**

**Daily Activity:**            RESPEC not on site

**Proposed Schedule:**    Monday: Field recon related to expanded monitoring.

Initials: ELK

# RESPEC Consulting & Services

Texas Brine, L.L.C.

Assumption Parish, Louisiana

Daily Field Report

Report By: Eric Krantz

Date: 04/07/13

Company: RESPEC

Work Order #:                   ()

Personnel	Company	Job Title

**Time Onsite:**            Start Time:                               End Time:                   

(Note: on-site time only reflects time on-site; it does not reflect time taken for off-site activities)

**Equipment Onsite:**

**Daily Activity:**            RESPEC not on site

**Proposed Schedule:**    Monday: Field recon related to expanded monitoring.

Initials: ELK

## **ME&A Daily Action Summary**

April 5, 2013

### **Subsidence Survey:**

- Arrived @ 8:15 am
- Ran conventional level loop starting at TBM 2 which is a nail set in a power pole adjacent to the main roadway and OxyGeismar #2 well pad. Ran level loop through brine wells (1,2 & 3), water wells (1,2 & 3), TBM's, and the two brine storage tanks. Attached is a spreadsheet with the results
- Departed 11:00 am

### **Sinkhole Perimeter/Hydrographic Survey:**

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- No Work Done

## **ME&A Daily Action Summary**

April 6, 2013

### **Subsidence Survey:**

- No Work Done

### **Sinkhole Perimeter/Hydrographic Survey:**

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- No Work Done

## **ME&A Daily Action Summary**

April 7, 2013

### **Subsidence Survey:**

- No Work Done

### **Sinkhole Perimeter/Hydrographic Survey:**

- No Work Done

### **Support Sinkhole Cleanup**

- No Work Done

### **Misc. Survey Work**

- No Work Done

# Michael Pisani & Associates

Texas Brine, L.L.C.

Assumption Parish, Louisiana

## Daily Field Report

Report By: Patrick Ritchie

Date: 4/5/2013

Company: MP&A

Work Order # 80-05

Health and Safety Meeting  YES  NO

Weather: 55 F, overcast, fog to partly cloudy

Personnel	Company	Job Title
<u>Patrick Ritchie</u>	<u>MP&amp;A</u>	<u>Environmental Scientist</u>
<u> </u>	<u> </u>	<u> </u>
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Site Activities: Start Time 9:00 End Time 13:30

**Equipment On-site:** Airboat

**Daily Activity:**  
Conduct in-situ monitoring surface water transect and industrial water well locations  
Measure water level for the industrial water wells  
Collected laboratory samples from the surface water transect locations

Estimated time of completion:  
On-going

**Proposed schedule:**  
Conduct in-situ monitoring surface water transect and industrial water well locations  
Measure water level for the industrial water wells  
Measure pressure and water level at TBC Geoprobe locations

On-going

Initials: PMR



